

Sudip Kumar Mazumder

List of Publications by Year in descending order

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127
papers

2,137
citations

331670

21
h-index

276875

41
g-index

127
all docs

127
docs citations

127
times ranked

1474
citing authors

#	ARTICLE	IF	CITATIONS
1	Master-Slave Current-Sharing Control of a Parallel DC-DC Converter System Over an RF Communication Interface. IEEE Transactions on Industrial Electronics, 2008, 55, 59-66.	7.9	214
2	A Ripple-Mitigating and Energy-Efficient Fuel Cell Power-Conditioning System. IEEE Transactions on Power Electronics, 2007, 22, 1437-1452.	7.9	204
3	A Universal Grid-Connected Fuel-Cell Inverter for Residential Application. IEEE Transactions on Industrial Electronics, 2010, 57, 3431-3447.	7.9	99
4	A Soft-Switching Scheme for an Isolated DC/DC Converter With Pulsating DC Output for a Three-Phase High-Frequency-Link PWM Converter. IEEE Transactions on Power Electronics, 2009, 24, 2276-2288.	7.9	92
5	Multiple Lyapunov Function Based Reaching Condition for Orbital Existence of Switching Power Converters. IEEE Transactions on Power Electronics, 2008, 23, 1449-1471.	7.9	70
6	Novel Zero-Current-Switching Current-Fed Half-Bridge Isolated DC/DC Converter for Fuel-Cell-Based Applications. IEEE Transactions on Industry Applications, 2013, 49, 1658-1668.	4.9	69
7	Self-triggered Communication Enabled Control of Distributed Generation in Microgrids. IEEE Transactions on Industrial Informatics, 2015, , 1-1.	11.3	62
8	Primary-Side-Converter-Assisted Soft-Switching Scheme for an AC/AC Converter in a Cycloconverter-Type High-Frequency-Link Inverter. IEEE Transactions on Industrial Electronics, 2011, 58, 4161-4166.	7.9	61
9	Railway Electrical Smart Grids: An introduction to next-generation railway power systems and their operation. IEEE Electrification Magazine, 2014, 2, 49-55.	1.8	60
10	Joint Optimization of Control Performance and Network Resource Utilization in Homogeneous Power Networks. IEEE Transactions on Industrial Electronics, 2009, 56, 1736-1745.	7.9	56
11	Optically Switched-Drive-Based Unified Independent $\frac{dv}{dt}$ and $\frac{di}{dt}$ Control for Turn-Off Transition of Power MOSFETs. IEEE Transactions on Power Electronics, 2015, 30, 2338-2349.	7.9	56
12	Modulation Scheme for Three-Phase Differential-Mode Ąuk Inverter. IEEE Transactions on Power Electronics, 2016, 31, 2654-2668.	7.9	52
13	A Review of Current Research Trends in Power-Electronic Innovations in Cyber-Physical Systems. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 5146-5163.	5.4	48
14	Discontinuous Modulation Scheme for a Differential-Mode Ąuk Inverter. IEEE Transactions on Power Electronics, 2015, 30, 1242-1254.	7.9	47
15	A Review of Cyber-Physical Security for Photovoltaic Systems. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2022, 10, 4879-4901.	5.4	47
16	Resolving Practical Design Issues in a Single-Phase Grid-Connected GaN-FET-Based Differential-Mode Inverter. IEEE Transactions on Power Electronics, 2018, 33, 3734-3751.	7.9	41
17	Closed-loop control of switching transition of SiC MOSFETs. , 2015, , .		38
18	Improved Dynamic Performance and Hierarchical Energy Management of Microgrids With Energy Routing. IEEE Transactions on Industrial Informatics, 2019, 15, 3218-3229.	11.3	34

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19	Optically Activated Gate Control for Power Electronics. IEEE Transactions on Power Electronics, 2011, 26, 2863-2886.	7.9	32
20	Reaching Criterion of a Three-Phase Voltage-Source Inverter Operating With Passive and Nonlinear Loads and Its Impact on Global Stability. IEEE Transactions on Industrial Electronics, 2008, 55, 1795-1812.	7.9	29
21	Communication Fault-tolerant Wireless Network Control of a Load-sharing Multiphase Interactive Power Network. , 0, , .		27
22	A Loss-Mitigating Scheme for DC/Pulsating-DC Converter of a High-Frequency-Link System. IEEE Transactions on Industrial Electronics, 2012, 59, 4537-4544.	7.9	23
23	Dynamic Economic Dispatch and Transient Control of Distributed Generators in a Microgrid. IEEE Systems Journal, 2019, 13, 802-812.	4.6	22
24	Improving Dynamic Response of Active Harmonic Compensator Using Digital Comb Filter. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2014, 2, 994-1002.	5.4	20
25	A low-device-count single-stage direct-power-conversion solar microinverter for microgrid. , 2012, , .		19
26	Control of Isolated Differential-Mode Single- and Three-Phase Ąuk Inverters at Module Level. IEEE Transactions on Power Electronics, 2018, 33, 8872-8886.	7.9	18
27	A High-power High-frequency and Scalable Multi-megawatt Fuel-cell Inverter for Power Quality and Distributed Generation. , 2006, , .		17
28	Smart Electrical Infrastructure for AC-Fed Railways With Neutral Zones. IEEE Transactions on Intelligent Transportation Systems, 2014, , 1-11.	8.0	17
29	Effects of Battery Buffering on the Post-Load-Transient Performance of a PSOFC. IEEE Transactions on Energy Conversion, 2007, 22, 457-466.	5.2	16
30	Sequence-Based Control of an Isolated DC/AC Matrix Converter. IEEE Transactions on Power Electronics, 2016, 31, 1757-1773.	7.9	16
31	Evaluation of first 10-kv optical ETO thyristor operating without any low-voltage control bias. , 2013, , .		15
32	Dynamic optical turn-off control of a high-voltage SiC MOSFET. , 2013, , .		15
33	Optical control of 1200-V and 20-A SiC MOSFET. , 2012, , .		14
34	Transient stability analysis of power system using polynomial Lyapunov function based approach. , 2014, , .		14
35	Switching-Sequence Control of a Higher Order Power-Electronic System Driving a Pulsating Load. IEEE Transactions on Power Electronics, 2020, 35, 1096-1110.	7.9	14
36	Passive Damping Optimization of the Integrated-Magnetics-Based Differential-Mode Ąuk Rectifier. IEEE Transactions on Power Electronics, 2020, 35, 10008-10012.	7.9	14

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37	Low ON-State Voltage Optically Triggered Power Transistor for SiC Emitter Turn-OFF Thyristor. IEEE Electron Device Letters, 2015, 36, 484-486.	3.9	13
38	Delay constrained optimal resource utilization of wireless networks for distributed control systems. IEEE Communications Letters, 2008, 12, 289-291.	4.1	12
39	Modulation scheme of the differential-mode Ćuk inverter for loss mitigation. , 2013, , .		12
40	Optically-triggered Power Transistor (OTPT) for Fly-by-light (FBL) and EMI-susceptible Power Electronics. , 0, , .		11
41	Multiple Lyapunov Function Based Reaching Condition Analyses of Switching Power Converters. , 0, , .		11
42	Optimal-sequence-based control of switching power converters in interactive power networks. Power Electronics Specialist Conference (PESC), IEEE, 2008, , .	0.0	11
43	Novel zero-current switching current-fed half-bridge isolated Dc/Dc converter for fuel cell based applications. , 2010, , .		11
44	Rotor Position Feedback Over an RF Link for Motor Speed Control. IEEE Transactions on Power Electronics, 2010, 25, 907-913.	7.9	11
45	Integrated Magnetics Design for a Three-Phase Differential-Mode Rectifier. IEEE Transactions on Power Electronics, 2021, 36, 10561-10570.	7.9	11
46	Design of an All-SiC Parallel DC/DC Weinberg Converter Unit Using RF Control. IEEE Transactions on Power Electronics, 2008, 23, 2893-2904.	7.9	10
47	Event- and Priority-Driven Coordination in Next-Generation Grid. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2016, 4, 1186-1194.	5.4	10
48	SiC DC Fast Charger Control for Electric Vehicles. , 2018, , .		10
49	Sequential Co-transmission of High-Frequency Power and Data Signals. IEEE Transactions on Industrial Informatics, 2018, 14, 4440-4445.	11.3	10
50	Multiresonant-Frequency Filter for an Electrosurgery Inverter. IEEE Transactions on Power Electronics, 2022, 37, 6242-6246.	7.9	10
51	A Novel Soft-Switching Scheme for an Isolated DC/DC Converter with Pulsating DC Output for a Three-Phase High-Frequency-Link PWM Converter. , 2008, , .		9
52	Dynamic stability analysis of power network. , 2015, , .		9
53	GaN-HEMT Based Very-High-Frequency AC Power Supply for Electrosurgery. , 2021, , .		9
54	Holistic Multi-timescale Attack Resilient Control Framework for Power Electronics Dominated Grid. , 2020, , .		9

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55	Impact and Mitigation of High-Frequency Side-Channel Noise Intrusion on the Low-Frequency Performance of an Inverter. IEEE Transactions on Power Electronics, 2022, 37, 11481-11485.	7.9	9
56	A Novel Modulation Scheme for Isolated PWM Active-Clamp Ąŧuk DC/DC Converter. IEEE Transactions on Power Electronics, 2022, 37, 14966-14980.	7.9	9
57	Stability Analysis of Micropower Network. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2016, 4, 1299-1309.	5.4	8
58	EMI Mitigation of a Ąŧuk-Based Power-Electronic System Using Switching-Sequence-Based Control. IEEE Transactions on Power Electronics, 2021, 36, 10627-10644.	7.9	8
59	Markov chain model for performance analysis of transmitter power control in contention based wireless MAC protocol. Telecommunication Systems, 2008, 38, 99-110.	2.5	7
60	Optical Modulation for High Power Systems: Potential for Electromagnetic-Emission, Loss, and Stress Control by Switching Dynamics Variation of Power Semiconductor Devices. , 2008, , .		7
61	Optically-activated gate control of power semiconductor device switching dynamics. , 2009, , .		7
62	A fault-tolerant switching scheme for a photovoltaic high-frequency-link inverter. , 2012, , .		7
63	A high-frequency-link photovoltaic inverter. , 2012, , .		7
64	Design and Characterization of High-Current Optical Darlington Transistor for Pulsed-Power Applications. IEEE Transactions on Electron Devices, 2017, 64, 769-778.	3.0	7
65	Reduced Collateral Tissue Damage Using Thermal-Feedback-Based Power Adaptation of an Electrosurgery Inverter. IEEE Transactions on Power Electronics, 2022, 37, 11540-11545.	7.9	7
66	Design of an All-SiC Radio-frequency Controlled Parallel DC-DC Converter Unit. , 2007, , .		6
67	Hysteresis based Triangular Current Mode Control for Bridgeless Totem Pole Converter. , 2021, , .		6
68	Improving Throughput-delay Performance by Merged Packet Routing in Wirelessly Controlled Interactive Power Networks. International Conference on Advanced Networking and Applications, 2007, , .	0.0	5
69	Markov Chain Model for Performance Analysis of Transmitter Power Control in Wireless MAC Protocol: Towards Delay Minimization in Power-network Control. International Conference on Advanced Networking and Applications, 2007, , .	0.0	5
70	Input/state/output modeling and control of dynamical systems with active singularities: Single- and multi-impact sequences. , 2008, , .		5
71	Soft switching schemes for multiphase dc/dc converter with six-pulse modulated pulsating output. , 2009, , .		5
72	Design of a Hybrid Controller ASIC for a VRM Using a 90-nm CMOS Process. IEEE Transactions on Power Electronics, 2009, 24, 2219-2230.	7.9	5

#	ARTICLE	IF	CITATIONS
73	Sequence-based control for standalone and networked switching power converters. , 2009, , .		5
74	Impact of DC link pulse coding on the harmonic distortion of the high-frequency-link inverter. , 2010, , .		5
75	A novel primary-side-assisted soft-switching and fault-tolerance of a high-frequency-link inverter for renewable-energy systems. , 2011, , .		5
76	Modeling and Control of Systems with Active Singularities Under Energy Constraints: Single- and Multi-Impact Sequences. IEEE Transactions on Automatic Control, 2012, 57, 1854-1859.	5.7	5
77	Self-contained control for turn-on transition of an optically driven IGBT. , 2014, , .		5
78	Deadtime Elimination in a GaN-Based Grid-Connected Differential-Mode Ąuk Inverter. IEEE Transactions on Industrial Electronics, 2019, 66, 3296-3302.	7.9	5
79	Switching Transition Control to Improve Efficiency of a DC/DC Power Electronic System. IEEE Access, 2021, 9, 91104-91118.	4.2	5
80	Novel control solutions for DoS attack delay mitigation in grid-connected and standalone inverters. , 2021, , .		5
81	High-Power Design Challenges for Differential-Mode EV Universal Battery Supercharger. IEEE Transactions on Industry Applications, 2022, 58, 5568-5581.	4.9	5
82	Optimal control of dynamical systems with active singularities under single- and multi-impact sequences: A ball/racket system example. , 2009, , .		4
83	Optically-modulated active-gate control (OMAG) for switching electrical power-conversion systems. , 2009, , .		4
84	A transformer-flux-balance controller for a high-frequency-link inverter with applications for solid-state transformer, renewable/alternative energy sources, energy storage, and electric vehicles. , 2011, , .		4
85	Photonic power electronics: Past, present, and future. , 2015, , .		4
86	Optimal switching sequence based control of a differential-mode inverter. , 2016, , .		4
87	Generalized Input Impedance Modeling of TL-Network-Based HFDPs for Validating Frequency-Dependent Criteria for Power-Signal Integrity. IEEE Transactions on Industrial Electronics, 2018, 65, 4114-4124.	7.9	4
88	Experimental Validation of Single-Stage Three-Phase Non-Isolated Cuk Rectifier. , 2019, , .		4
89	Inductor and Transformer-Coupled Magnetic Structure for Zero-Ripple dc-dc Ąuk Converter. , 2021, , .		4
90	Control of high-frequency-link inverter using optimal switching sequence. , 2012, , .		3

#	ARTICLE	IF	CITATIONS
91	Harmonic-compensation based control of a nonlinear differential-mode inverter. , 2013, , .		3
92	Editorial: Special Issue on High-Frequency-Link Power-Conversion Systems, 2014. IEEE Transactions on Power Electronics, 2014, 29, 3849-3851.	7.9	3
93	Modular control of a differential-mode inverter. , 2015, , .		3
94	Soft-switched discontinuous pulse-width pulse-density modulation scheme. , 2016, , .		3
95	GaN-FET based grid-connected solar microinverter: Some design insights. , 2017, , .		3
96	Active Optical Modulation for Series-Connected Emitter Turn-Off Thyristors. IEEE Transactions on Industrial Electronics, 2019, 66, 5576-5580.	7.9	3
97	Cost-Reducing Optimization Strategies of Electrical Trains. , 2019, , .		3
98	High Performance Off-Board DC Fast Charger. , 2021, , .		3
99	Guest Editorial: Special Issue on Sustainable Energy Through Power-Electronic Innovations in Cyber-Physical Systems. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 5142-5145.	5.4	3
100	Design of a hybrid controller ASIC for a VRM using 90 nm CMOS process. , 2008, , .		2
101	Optically-activated gate control (OAGC) for the next-generation SiC-based power electronics devices and applications. , 2009, , .		2
102	A fault-tolerant switching scheme for a high-power high-frequency-link inverter. , 2012, , .		2
103	Soft-switched hybrid modulation scheme for pulsating-Dc-link converters. , 2012, , .		2
104	An Optimal Sequence-Based-Controller (OSBC) for a grid-connected three-phase photovoltaic HFL inverter. , 2013, , .		2
105	New single-bias all-optical ETO configuration for a 15 kV-100A SiC thyristor eliminating the turn-on leakage current. , 2015, , .		2
106	Analysis of Input Current Ripple and Optimum Filter Capacitor for Fuel-Cell-Based Single-Phase Inverter. Journal of Fuel Cell Science and Technology, 2015, 12, .	0.8	2
107	Grid-Connected GaN Solar Microinverter. , 2018, , .		2
108	Transactive Control Approach to Trip Optimization in Electric Railways. , 2019, , .		2

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109	Impact of Blockchain Delay on Grid-Tied Solar Inverter Performance. , 2021, , .		2
110	Control design for efficient and cost-effective distributed fuel cell power electronics system. , 2008, , .		1
111	A Novel zero-voltage-switching scheme for renewable/alternative energy based high-frequency-AC-link inverter. , 2009, , .		1
112	Hybrid-modulation scheme for dc-link-capacitor-less high-frequency-link inverters. , 2012, , .		1
113	A photoconductive semiconductor switch vertically embedded with MISFETs for high-power high-repetition-rate application. , 2015, , .		1
114	State observer design for a high frequency distributed power system. , 2017, , .		1
115	Saturability Algorithm of a Sub-Bandgap Laser for Triggering a Photoconductive Switch. IEEE Journal of the Electron Devices Society, 2017, 5, 395-399.	2.1	1
116	Smart LED Lighting using GaN-based "Discrete" Power and Data Sequential Co-Transfer Network. , 2018, , .		1
117	Distributed Control and Power Management of Islanded DC Nanogrids with Applications to Rural Electrification. , 2020, , .		1
118	Airgap-less Integrated Magnetic Array Using High Performance Magnetic Material in the EV Chargers. , 2021, , .		1
119	A compact bi-directional power-conversion system scheme with extended soft-switching range. , 2009, , .		0
120	Molecular dynamics and electrical simulation of a novel GaN/4H-SiC hetero-structure optically triggered vertical NPN device. , 2010, , .		0
121	Sequence-based Lyapunov stability of power-electronic converters. , 2012, , .		0
122	Modular and compact design for an isolated high-frequency-link inverter using hybrid-modulation scheme. , 2014, , .		0
123	Low-leakage drive for optically-triggered high-power SiC emitter turn-off thyristors. , 2015, , .		0
124	Autonomous control of a high-frequency distributed power system. , 2017, , .		0
125	Experimental optical transistor for all-optical SiC ETO thyristor. , 2017, , .		0
126	Predictive Switching Sequence-based Control for Constant Power Load. , 2019, , .		0

#	ARTICLE	IF	CITATIONS
127	Distributed Control and Dynamic Optimization of a Microgrid. , 2020, , .		0